



Pharmacogenomics, personalisation and public health

2022 FORUM Sir Colin Dollery Lecture

Chaired by Professor Dame Anne Johnson DBE PMedSci,
President, Academy of Medical Sciences,

Keynote by Professor Dan Roden, Professor of Medicine and
Pharmacology and Biomedical Informatics, Vanderbilt
University

*The Lecture will be preceded by an informal networking lunch themed
around the 'clinical implementation of pharmacogenomics'.*

Thursday 13 October 2022

Victoria Gallery & Museum, Liverpool

 The **Academy of
Medical Sciences**

FORUM



The Academy of Medical Sciences acknowledges their responsibility to create spaces, both offline and online, that are welcoming and respectful to everyone. Creating a safe space is a collective responsibility and everyone is individually responsible for checking their own behaviour. This includes session chairs, speakers, attendees and staff, whether participating online or in person. For more information, you can download the Academy's Safer Space Policy for this event from the website: <https://acmedsci.ac.uk/file-download/64784437>



We are conscious that autumn and winter months bring a rise in many infectious diseases, including flu and COVID-19 and therefore our in-person events may require additional protective measures. We carefully monitor latest case numbers and public health advice, and may make changes to events at short notice in response. We expect attendees of our in-person events to act responsibly. If you have symptoms of flu, COVID-19 or other respiratory infections, at the time of the event, or have recently tested positive for COVID-19, please do not attend. This is especially important as many of our events are attended by patients and carers who may be particularly vulnerable to winter viruses. In most cases our events include hybrid attendance options. Where there is in-person attendance, we provide sanitiser stations and consider ways to ensure as much ventilation as possible. Although you are not required to wear a mask, please do wear one if you would like to. Please contact a member of Academy staff if you have any questions about our in-person event guidance.



We will be filming and livestreaming the lecture and taking photographs. If you do not wish to have your photograph used, please make yourself known to an Academy staff member at the start of the meeting. Academy staff can be identified by their name badges and Academy lanyards. We will be live tweeting from the @AcMedSci account, so please feel free to post on social channels and do remember to tag us.

FORUM

Linking life science sectors

"The Academy's FORUM provides an independent platform where stakeholders from across the life sciences sector can connect and take forward national discussions on scientific opportunities and technology trends"

Professor Sir John Bell GBE FRS HonFREng FMedSci, Regius Professor of Medicine, University of Oxford

The Academy's FORUM was established to catalyse connections across the science sector, including industry, academia and the wider healthcare sector.

Through the FORUM we aim to promote:

- **Sustainable translation of research outputs into health and wealth gains.**
- **A vibrant innovation ecosystem.**
- **A strong UK industry.**

The Academy's FORUM Sir Colin Dollery Lecture recognises key individuals working at the interface of academia, industry and healthcare and supports productive collaboration amongst FORUM members, Academy Fellows, invited guests and members of the public.

The lecture is named in memory of Sir Colin Dollery FMedSci's contribution to biomedical and health research and his family's commitment of long-term financial support for this event. This year marks the second FORUM Sir Colin Dollery Lecture.

The success of the FORUM events programme relies on supporter organisations who make an annual donation. These donations enable the Academy to deliver its FORUM programme of high-profile meetings, including the Lecture.

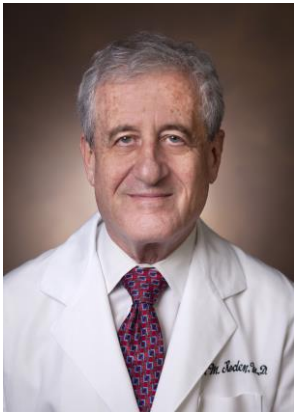
To discuss how your organisation can join the network of FORUM supporters, please contact forum@acmedsci.ac.uk.

Agenda

This Lecture builds on the first FORUM Annual Lecture in 2003, which discussed 'pharmacogenetics: personalisation and segmented efficacy'. The 2003 summary report can be downloaded from the website: <https://acmedsci.ac.uk/file-download/3490998>

Time	Lunch and learn session
13:00-14:00	<p>During an informal buffet-style lunch, we will screen video presentations from:</p> <ul style="list-style-type: none"> • Professor Sandosh Padmanabhan, Professor of Cardiovascular Genomics and Therapeutics, University of Glasgow • Dr Imran Rafi, General Practitioner, Reader Primary Care and Genomics, and Dr Judith Hayward, General Practitioner with special interest in Genetics/Genomics • Dr Videha Sharma, Lecturer (Health Informatics), University of Manchester & National Medical Director's Fellow, Faculty of Medical Leadership and Management
Session 1: Keynote address	
14:00-14:05	Welcome and introductions Professor Dame Anne Johnson DBE PMedSci
14:05-14:45	Keynote lecture: Professor Dan Mark Roden, MD Professor of Medicine and Pharmacology and Biomedical Informatics, Vanderbilt University
14:45-15:00	Keynote Q&A
15:00-15:15	Patient perspective Jane Burns Member of the Drug Safety Patient & Public Involvement (PPI) Group, Wolfson Centre for Personalised Medicine
15:15-15:30	Break
Session 2: Panel discussion	
15:30-16:25	<p>Chaired by Professor Sir Munir Pirmohamed FMedSci, David Weatherall Chair of Medicine, University of Liverpool</p> <p>Professor Dan Mark Roden, MD Professor of Medicine and Pharmacology and Biomedical Informatics, Vanderbilt University</p> <p>Professor Katherine Payne Professor of Health Economics, University of Manchester & registered Pharmacist</p> <p>Professor Anneke Lucassen Professor of Genomic Medicine & Director of the Centre for Personalised Medicine, University of Oxford</p> <p>Dr Richard Turner Director - Physician in Genomic Sciences, GlaxoSmithKline</p> <p>Jane Burns Member of the Drug Safety Patient & Public Involvement (PPI) Group, Wolfson Centre for Personalised Medicine</p>
16:25-16:30	Closing remarks
Session 3: Drinks reception	
16:30-18:00	Drinks reception and networking
18:00	Event close

Keynote speaker: Professor Dan Roden, MD



Professor Dan Roden, MD, is Professor of Medicine, Pharmacology, and Biomedical Informatics and Senior Vice-President for Personalized Medicine at Vanderbilt University Medical Center.

His research program studies how genetic variation affects human disease susceptibility, with a focus on pharmacogenetics, and on genetic determinants of abnormal heart rhythms, especially those induced by drugs.

He was tasked in 2006 with leading Vanderbilt University's efforts in personalized medicine. Under his leadership, Vanderbilt University has become internationally-recognized for cutting edge programs in this area, including the large (280,000 sample) biobank, BioVU, and the electronic health record-based pre-emptive pharmacogenetic program, PREDICT. He served as principal investigator (PI) for the Vanderbilt sites of the Pharmacogenomics Research Network (2001-2021), and currently serves as co-PI for the Vanderbilt site of the Electronic Medical Records and Genomics (eMERGE) Network (2007-2025), and the Data and Research Center for the US All of Us program.

He has served as primary mentor for 60 post-doctoral fellows and graduate students, the majority of whom hold appointments in academic departments in the US, Canada, the United Kingdom, France, Germany, Italy, Denmark, Japan, Australia, and Taiwan; five currently serve as deans, department chairs, or division directors.

Dr Roden has received the American Society for Clinical Pharmacology and Therapeutics' Leon Goldberg Young Investigator Award, Rawls Palmer Progress in Science Award, and the Oscar Hunter Career Award; the Distinguished Scientist Award and the Douglas Zipes lectureship from the Heart Rhythm Society; the Distinguished Scientist Award and the inaugural Functional Genomics and Translational Biology Medal of Honor from the American Heart Association; the Alumnus Lifetime Achievement Award and the Louis and Artur Lucian Award in Cardiovascular Research from McGill; and the Jay and Jeanie Schottenstein prize in cardiovascular sciences from the Ohio State University. He has been elected to membership in the American Society for Clinical Investigation and the Association of American Physicians, and fellowship in the American Association for the Advancement of Science.

Panellist biographies

Jane Burns has been a member of the Drug Safety Patient & Public Involvement (PPI) group at the Wolfson Centre for Personalised Medicine, University of Liverpool for approximately 12 years. Jane also has strong links with a charity called Stevens-Johnson Syndrome (SJS) Awareness UK based in London (founded by Nadier Lawson), which collaborates closely with the PPI group in Liverpool. Through PPI and the SJS charity, Jane has worked on a number of important initiatives to raise awareness of SJS/Toxic Epidermal Necrolysis (SJS/TEN) and the importance of reporting such reactions through the Medicines and Healthcare Regulatory Agency Yellow Card Scheme.

As a patient representative, Jane was recently involved with the Royal College of Physicians and British Pharmacological Society, providing a patients perspective of personalised prescribing. Jane is passionate about raising the profile of pharmacogenetic research and sharing her experience of SJS/TEN to raise awareness and improve how patients are treated with medicines.

Professor Anneke Lucassen, is a Professor of Genomic Medicine and Director of the Centre for Personalised Medicine, University of Oxford.

As Professor of Clinical Genetics at the University of Southampton, she set up a translational research group exploring the ethico-legal aspects of big data in medicine, with genomic medicine as a particular example. She also set up a Clinical Ethics and Law in Society (CELS) group in Southampton and returned to Oxford to set up their CELS group

Our current research programme addresses the benefits of genomic discovery in practice and its direct relevance to patients and society. We have made field changing contributions to understanding the ethical aspects of, for example: misattributed genetic relationships; familial contact tracing in genetics; unanticipated clinical predictions from genomic findings genetic testing of children for adult diseases; high rates of spurious results from direct to consumer genetic tests; the hybrid territory between research and clinical practice. These have been incorporated into clinical guidelines and position statements.

Panellist biographies

Professor Katherine Payne is an academic health economist with 28-years applied and methodological research experience in the evaluation and valuation of health care interventions and specifically precision medicine and prevention. She has over 150 peer-reviewed publications and had a key role in multi-disciplinary research programmes and projects funded by Medical Research Council (MRC), National Institute of Health and Care Research, Department of Health and Social Care, and charities (e.g. Cancer Research UK, Melanoma Focus, Versus Arthritis). She has been a member of numerous national funding review panels (UK, Canada, The Netherlands, France, Switzerland, Singapore, Luxembourg), appraising projects including specific funding calls for precision medicine, use of artificial intelligence and cancer prevention and early detection.

She has a particular interest in the use of economic evidence to inform decision-making in practice and was a member of a National Institute for Health and Care Excellence Technology Appraisal Committee between October 2003 and 2012. From April 2018, Katherine took over as Centre lead for the Manchester Centre for Health Economics and directs the strategic contribution of health economics in research and teaching and capacity building for the University of Manchester.

Dr Richard M Turner is a Director in Genomic Sciences at GlaxoSmithKline. Prior to this, he was an Academic Clinical Lecturer with a Health Education England Genomics Research Fellowship at the University of Liverpool, where he also completed clinical training in Clinical Pharmacology and Therapeutics with General Internal Medicine. He graduated in medicine from the University of Cambridge and undertook his PhD as an MRC fellow in Liverpool investigating the clinical and genomic factors that influence statin exposure and adverse responses. His primary research interests are pharmacogenomics and genomics-driven drug development.

Recent & upcoming FORUM programme

25 November 2022	<p>2021 FORUM Sir Colin Dollery Lecture: Showcasing the UK's scientific contributions to tackling the pandemic</p> <p>This event showcased some of the key contributions research has made throughout the global COVID-19 crisis, heard from some of the people leading or participating in this research, and examined what lessons we can learn to better deal with future challenges. For the report and some of the talks, please see our website.</p>
10 December 2022	<p>From bedside to bench: experimental medicine and clinical insights for understanding chronic pain</p> <p>This workshop was held in partnership with the British Neuroscience Association, The Physiology Society and Versus Arthritis. It explored opportunities to reinvigorate preclinical and clinical chronic pain research, including using patient insight for reverse translation. The report will be available on our website in the coming weeks.</p>
15 December 2022	<p>Antimicrobial resistance research: learning lessons from the COVID-19 pandemic</p> <p>This workshop was hosted jointly with the Department of Health and Social Care and the National Institute for Health and Care Research. Its outcomes aim to inform the work of the UK AMR Research Coordination Group, which was established as part of the UK AMR Research Programme to identify priority areas for AMR research.</p>
March 2022	<p>Clinical trials for rare and ultra-rare diseases</p> <p>This workshop, held in partnership with the Faculty of Pharmaceutical Medicine, discussed innovations in clinical trials to be applied to rare diseases. Attendees also considered what criteria for acceptability these innovations have amongst trial participants, trial sites, trial sponsors, regulators and health technology assessors. The workshop report and summary for people living with rare conditions can be found on our website.</p>
17 June 2022	<p>Cross-sector mobility in the life sciences sector</p> <p>This workshop convened experts from academia, the healthcare system, industry, charities and more to discuss the value of cross-sector mobility and to suggest action-oriented recommendations to support and improve cross-sector mobility. This workshop will feed into the Academy's project on the 'long-term sustainability of health research in the UK', the report of which will be published in early 2023.</p>
13 October 2022	<p>2022 FORUM Sir Colin Dollery Lecture: Pharmacogenomics, personalisation and public health</p>
Topics bring considered for 2023 FORUM workshops:	<ul style="list-style-type: none"> • Enabling environmentally-responsible medical research • Artificial intelligence in the healthcare system • Understanding pregnancy: baby steps to pregnancy-specific drugs • Opportunities and challenges in the early detection and diagnosis of neurodegenerative disorders

Plus other events in scoping – please ask us if interested!



Sir Colin Dollery FMedSci

Sir Colin Dollery FMedSci, Professor of Clinical Pharmacology and Medicine and consultant clinical pharmacologist, was a founder Fellow of the Academy of Medical Sciences. Four years into the establishment of the Academy, Sir Colin volunteered for the role of Treasurer at a time when the organisation had only modest resources. During Sir Colin's period as Treasurer, the Academy prospered and when he retired from the post in 2006 the Academy was on a firmer footing.

With his background in pharmacology, Colin was well placed to assist the Academy with a new project that started to take shape during his tenure as Treasurer. This was the Academy's FORUM, which has grown and prospered in the intervening years.

We are most grateful to the Dollery family for the financial support of this annual lecture in Sir Colin's name.



Sir Colin Dollery FMedSci,
*Portrait of the Dean of the Royal Postgraduate
Medical School by Tom Wood 1996 Photograph
courtesy of Martin Wilkins*



Academy of Medical Sciences
41 Portland Place
London W1B 1QH

 @acmedsci

+44 (0)20 3141 3200
info@acmedsci.ac.uk
www.acmedsci.ac.uk

Registered Charity No. 1185329
Registered Company No. 3520281



For more information about the Academy's
FORUM, please contact forum@acmedsci.ac.uk